(FILE 'HOME' ENTERED AT 15:26:11 ON 29 NOV 2006)

FILE 'CAPLUS, MEDLINE, EMBASE, BIOSIS, LIFESCI' ENTERED AT 15:26:29 ON 29 NOV 2006

L1 18 S (CDMP-1 OR GDF5) AND (PERIOSTEUM OR BONE MARROW OR SYNOVIAL)
L2 5 S L1 AND PY<=1999
L3 1 DUP REM L2 (4 DUPLICATES REMOVED)

WEST Search History

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DATE: Wednesday, November 29, 2006

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		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ	
☐	L15	l1 and L14	2
☐	L14	424/93.1.ccls.	1109
☐	L13	l1 and L12	11
☐	L12	435/325.ccls.	21368
☐	L11	CDMP-1 with (precursor or stem)	1
☐	L10	CDMP-1 with (skeletal or chondrocyte or connective)	17
☐	L9	CDMP-1 with (periosteum or bone marrow or synovial) with stem	0
☐	L8	CDMP-1 near (periosteum or bone marrow or synovial) near stem	0
☐	L7	l4 and (skeletal or chondrocyte or connective)	71
☐	L6	L5 and (skeletal or chondrocyte or connective)	56
☐	L5	l3 and (periosteum or bone marrow or synovial)	60
☐	L4	l2 and (periosteum or bone marrow or synovial)	78
☐	L3	stem and L1	76
☐	L2	precursor and L1	89
☐	L1	CDMP-1	111

END OF SEARCH HISTORY

NCBI Entrez Gene

1: Gdf5 growth differentiation factor 5 [*Mus musculus*]

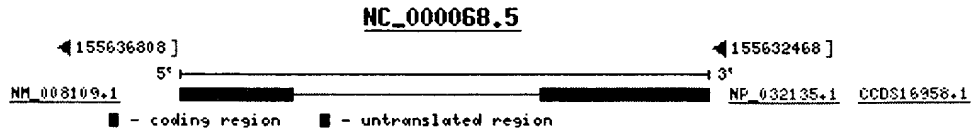
GeneID: 14563 updated 23-Nov-2006

Summary

Official Symbol	Gdf5 provided by MGI
Official Full Name	growth differentiation factor 5 provided by MGI
Primary source	MGI:95688
Gene type	protein coding
RefSeq status	Provisional
Organism	*Mus musculus*
Lineage	*Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus*
Also known as	bp; CDMP-1

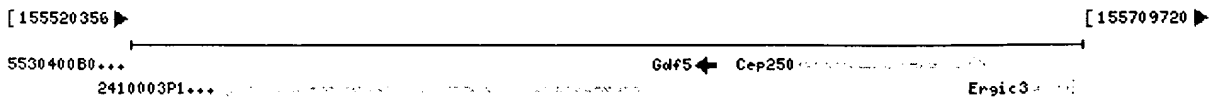
Genomic regions, transcripts, and products

(minus strand) Go to reference sequence details



Genomic context

chromosome: 2; **Locations:** 2 H1; 2 90.0 cM



Bibliography

Related Articles in PubMed

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GeneRIFs: Gene References Into Function What's a GeneRIF?

1. GDF5 has a role in growth of developing joints, including early joint interzones, adult articular cartilage, and the joint capsule
2. Results describe 2 mutations in growth and differentiation factor 5 (GDF5) that alter receptor-binding affinities.
3. Deficiency in knockout mice affects biomechanical behavior and ultrastructure of mouse skin.
4. Excessive apoptosis in the absence of GDF5 results in developmental failure of the phalanges.
5. The fact that for both gdf5 family members the type I and type II receptor-binding sites interact suggests that the sites on the receptors may interact as well, suggesting how preformed receptor heterodimers may form.
6. GDF-5 synergistically enhances de novo bone formation capability of bone marrow mesenchymal cells in hyaluronan composites in rats.
7. concordance between the mRNA expression profiles of GDF5 and the gap junction gene, Cx43, in the mouse embryonic limb, spine, and heart, consistent with coordinated functions for these gene products during

Submit: New GeneRIF Correction

Alleles

The following allele types are documented at Mouse Genome Informatics (MGI)

- Spontaneous 1 citation

Interactions

Description .....

Product	Interactant	Other Gene	Complex	Source	Pubs
GDF5 interacts Chl2.					
NP_032135.1	NP_598470.2	Chrdl2		BIND	PubMed
Prss11 interacts with Gdf5.					
NP_032135.1	NP_062510.1	Htra1		BIND	PubMed

General gene information

Markers

Gdf5(e-PCR)
Links: UniSTS:143190
Alternate name: MGI:1277834

U08337(e-PCR)
Links: UniSTS:159059
Alternate names: 300; ND

REN57714(e-PCR)
Links: UniSTS:382514

REN57716(e-PCR)
Links: UniSTS:382516

REN57730(e-PCR)
Links: UniSTS:382530

REN57733(e-PCR)
Links: UniSTS:382533

NoName(e-PCR)
Links: UniSTS:461894
Alternate name: MGI:3047584

NoName(e-PCR)

Pathways

KEGG pathway: Cytokine-cytokine receptor interaction
04060
KEGG pathway: TGF-beta signaling pathway
04350

Homology

Human
Map Viewer

GeneOntology

Provided by MGI

Function	Evidence
cytokine activity	IEA
growth factor activity	IEA
protein binding	IPI Pubmed

Process	Evidence
embryonic limb morphogenesis	IMP Pubmed
growth	IEA
regulation of apoptosis	IMP Pubmed

Component	Evidence
extracellular space	RCA Pubmed

General protein information

Names

growth differentiation factor 5
brachypodism
cartilage-derived morphogenetic protein-1

NCBI Reference Sequences (RefSeq)

RefSeqs maintained independently of Annotated Genomes

These reference sequences exist independently of genome builds. Explain

mRNA and Protein(s)

1. **NM_008109.1→NP_032135.1 growth differentiation factor 5**

Source sequence(s) U08337
Consensus CDS CCDS16958.1
Conserved Domains (2) summary

pfam00688 Location:164–349 Blast Score:259	TGFb_propeptide; TGF-beta propeptide
smart00204 Location:394–495 Blast Score:449	TGFB; Transforming growth factor-beta (TGF-beta) family; Family members are active as disulphide-linked homo- or heterodimers

RefSeqs of Annotated Genomes: Build 36.1

The following sections contain reference sequences that belong to a specific genome build. Explain

Reference assembly (C57BL/6J)

Genomic

1. **NC_000068.5 Reference assembly (C57BL/6J)**
   Range 155636808..155632468, complement
   Download GenBank FASTA

2. **NT_039207**
   Range 96715328..96710988, complement
   Download GenBank FASTA

Alternate assembly (based on Celera)

Genomic

1. **AC_000024.1 Alternate assembly (based on Celera)**
   Range 161878603..161874290, complement
   Download GenBank FASTA

2. **NW_001030712**

Alternate assembly (based on MGSCv3)

Genomic

1. **NW_000179 Alternate assembly (based on MGSCv3)**
   Range 4484541..4480213, complement
   Download GenBank FASTA

Related Sequences

Nucleotide		Protein	Strain
Genomic	AL845445.14 (116374..120714, complement)	None	
Genomic	CQ848467.1	CAH18057.1	
mRNA	AB259648.1	BAF36558.1	NC
mRNA	AK041168.1	BAC30847.1	C57BL/6J
mRNA	BC034546.1	AAH34546.1	FVB/N
mRNA	U08337.1	AAA18778.1	CD-1

Protein Accession	Links	
P43027	GenPept	UniProt
Q8BRW9	GenPept	UniProt

Additional Links

- Gene Expression Database (GXD) at MGI MGI:95688
- UniGene Mm.4744

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